



# 2040 MTP Regional Growth Scenarios and their Performance

July 10, 2014



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# Common Element = Scenario Planning

- ◆ How we grow is not a forgone conclusion
- ◆ Allows us to ask: what if?

For example: What if future development takes place differently than it has in the past?



# Scenario Planning

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- ◆ For example: What if future development takes place differently than it has in the past?



# Scenario Planning

- ◆ Approach that uses growth scenarios to understand costs and benefits of development patterns
  - ◆ Land consumption
  - ◆ Transportation conditions
  - ◆ Environmental impacts
  - ◆ Economic competitiveness
- ◆ Integrate land use and transportation planning to ensure effective long-term policy decisions



Indicator	Base Case	Alternate Case
Land We Will Consume:	365,000 acres	91,000 acres
Infrastructure Costs:	\$6,957,085,995	\$3,406,798,045
Intersections per acre:	.034	.11
New Road Miles:	4,544 miles	2,225 miles
Acres of New Impervious Surfaces:	62,444 acres	35,033 acres
Vehicle Miles of Travel Increase:	39 miles	35.9 miles
Density Patterns- Region Wide:	1.13 persons/acre	5.8 persons/acre

*Example from Nashville MPO*



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# 2040 MTP: Scenario Planning

June 2013



LUTI Meetings / Workshops / Focus Groups

Spring 2015



Futures 2040  
Recommendations

# What are the scenarios?

- ◆ Allowable Uses
- ◆ Emerging Lifestyles
- ◆ Balancing Jobs and Housing



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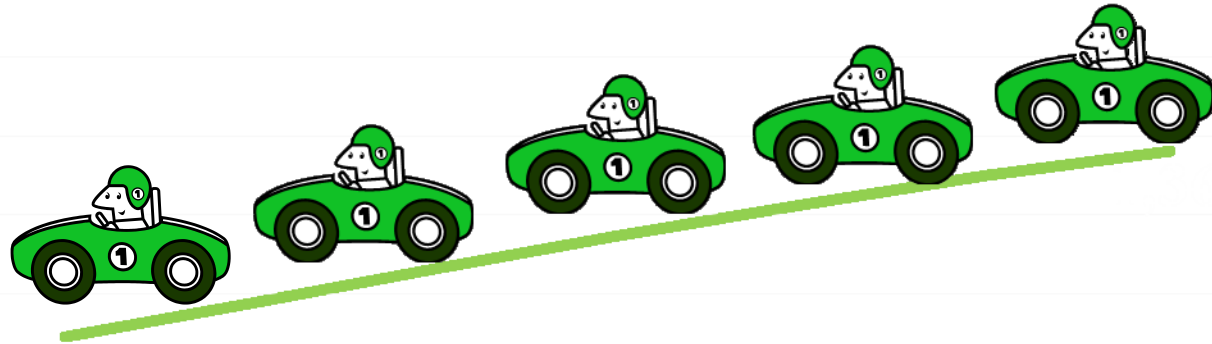
# What do the scenarios have in common?

- ◆ Local data (except zoning!!)
- ◆ Model structure & equations
- ◆ Roadway network
- ◆ Regional population projection
- ◆ Regional employment projection



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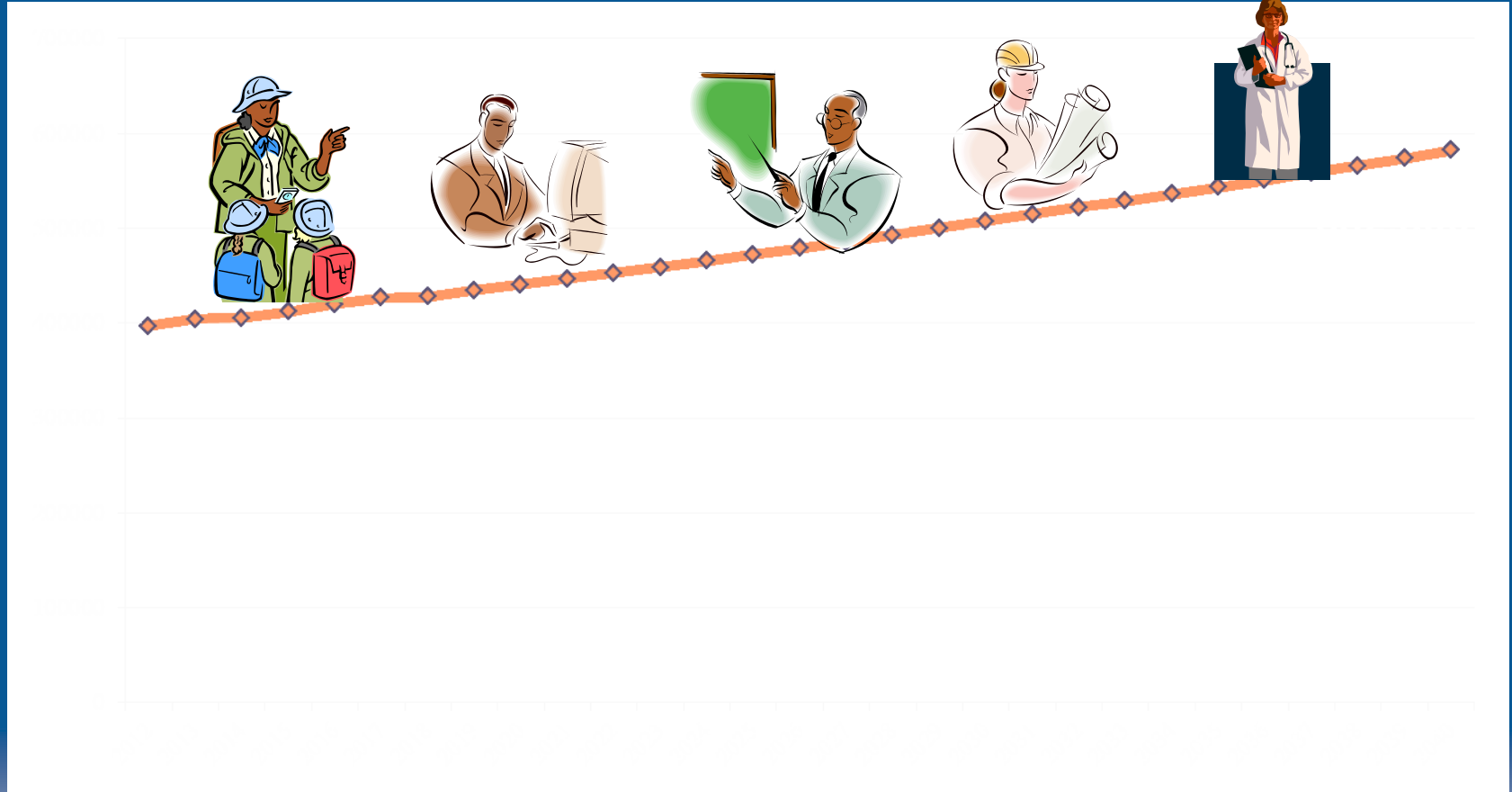
# Population Projection



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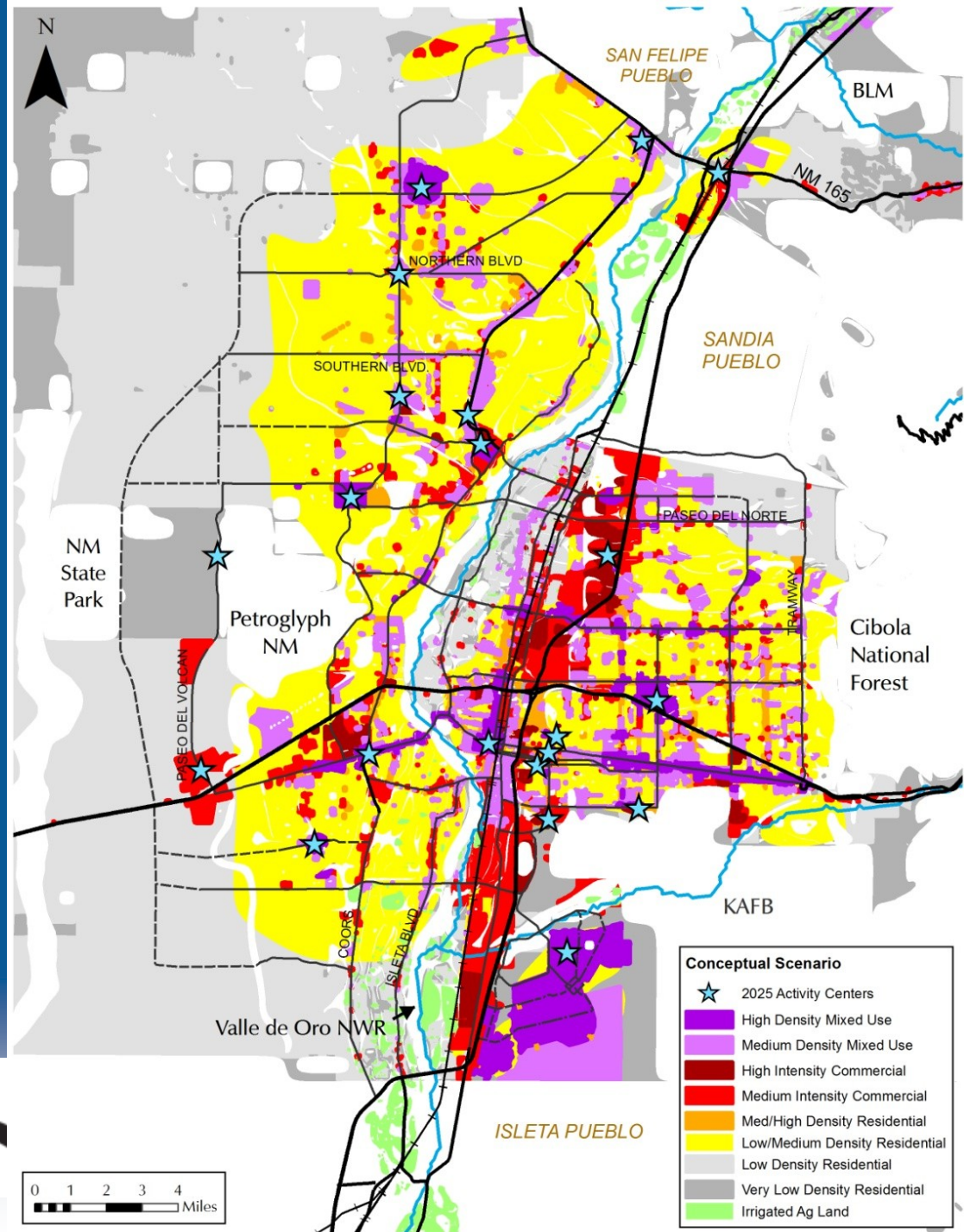


# Employment Projection

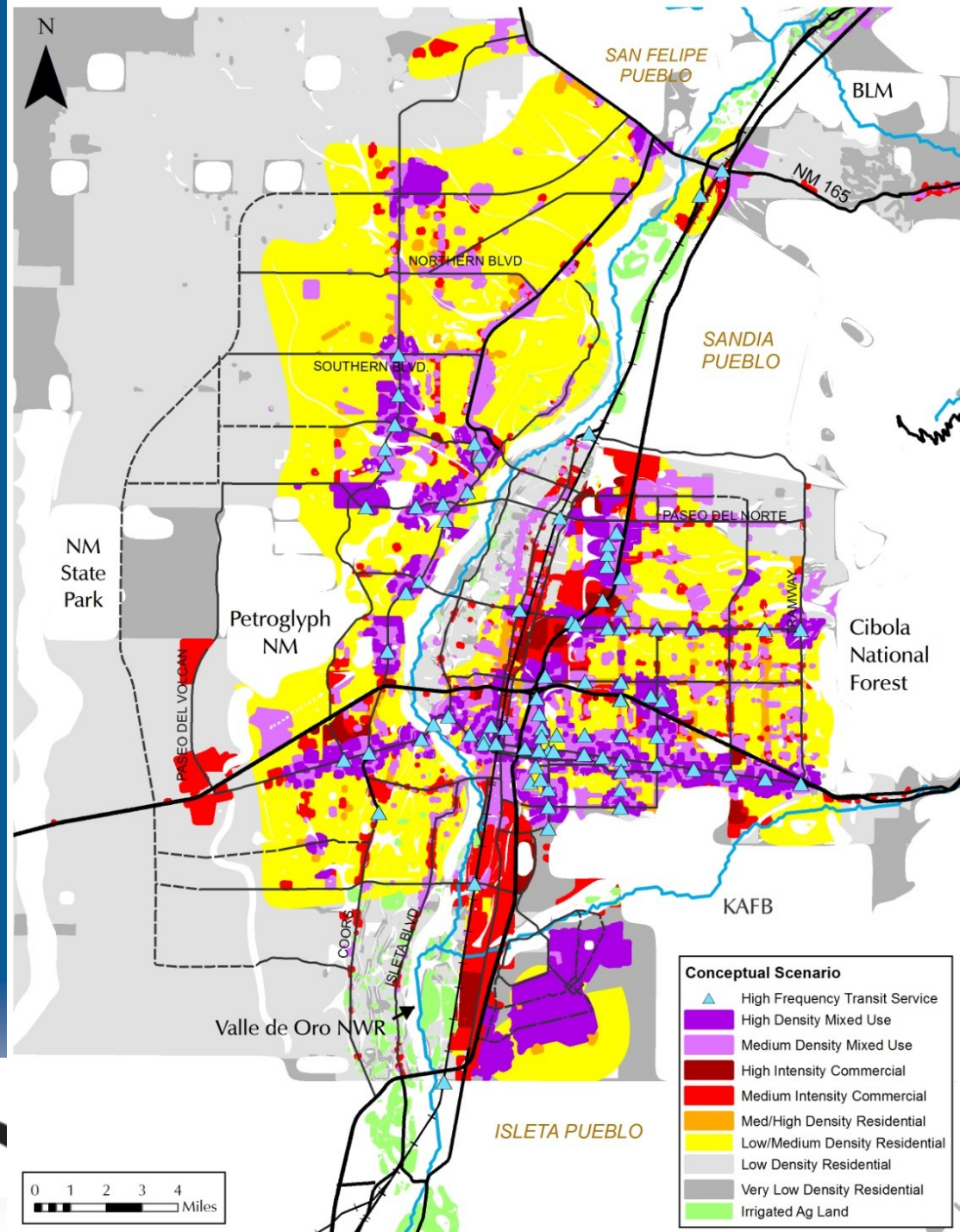


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# Zoning: Allowable Uses

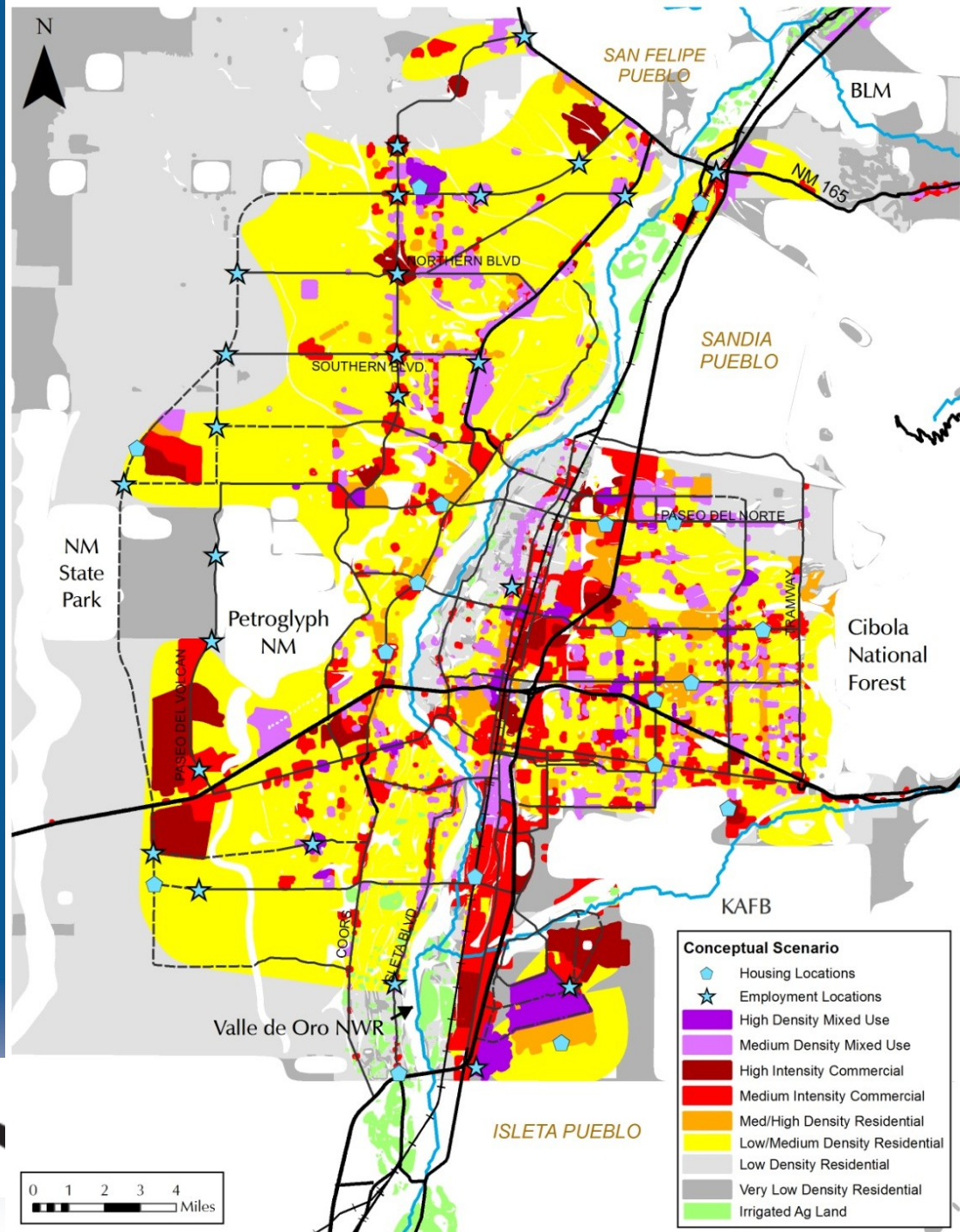


# Zoning: Emerging Lifestyles



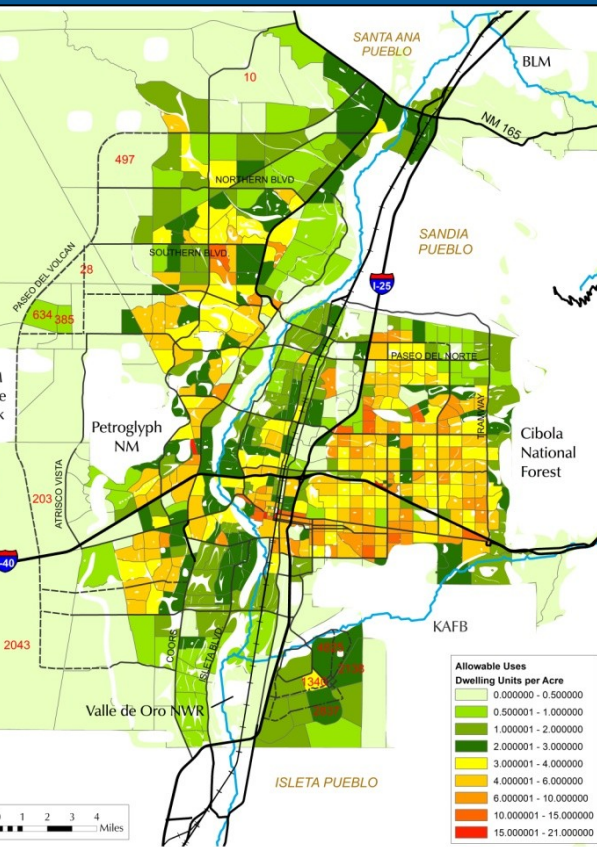


# Zoning: Balancing Housing & Jobs

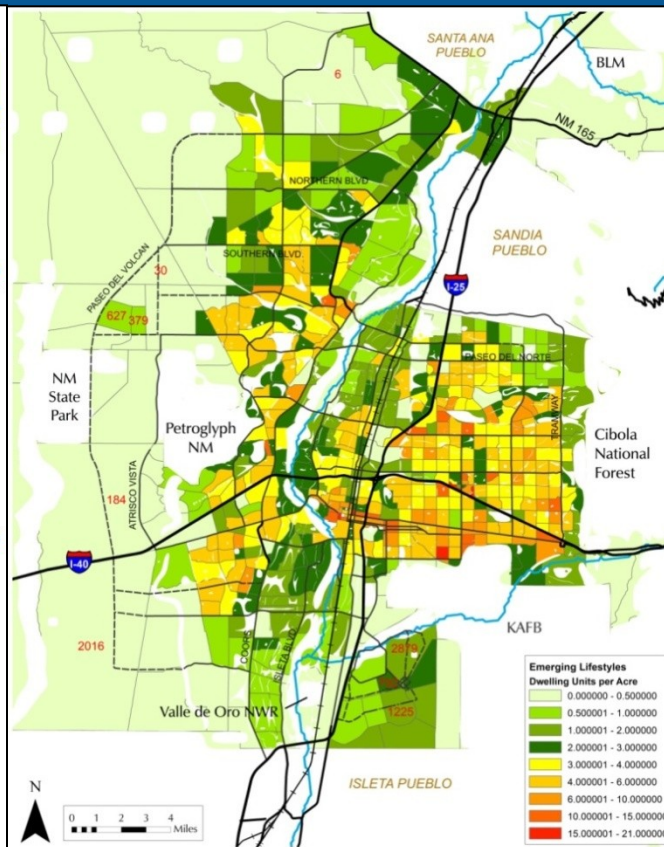


# Housing by Scenario

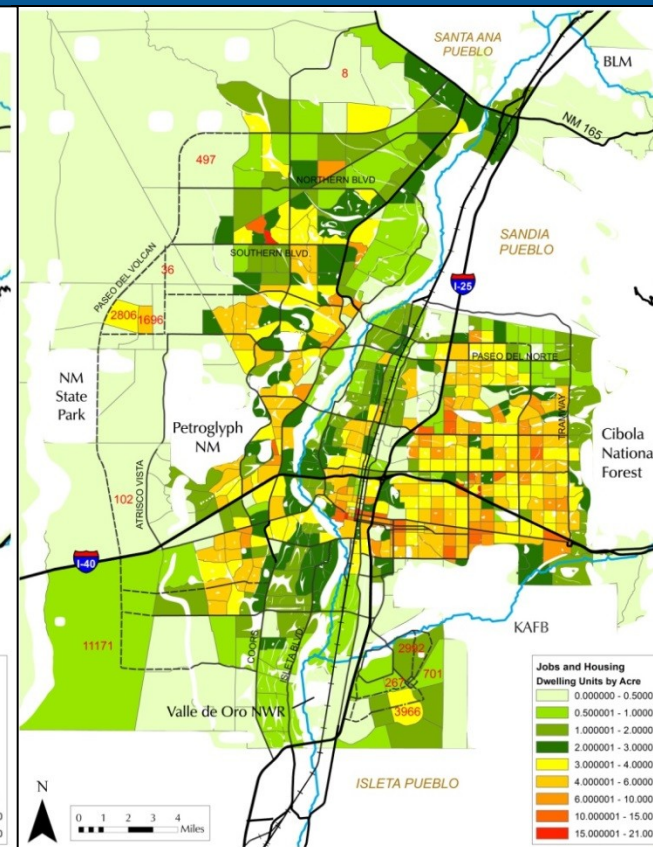
## Allowable Uses



## Emerging Lifestyles



## Balancing Housing & Jobs



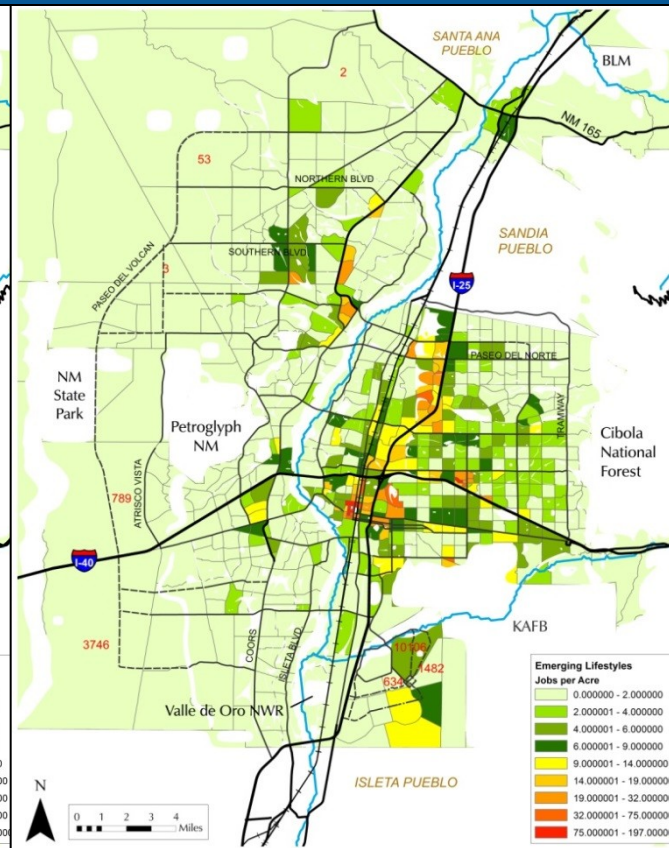


# Employment by Scenario

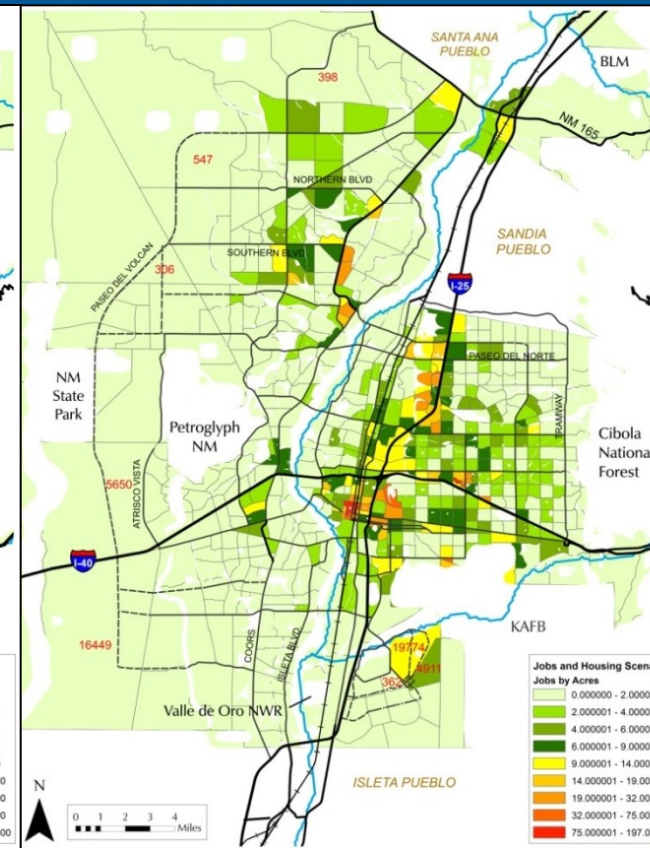
## Allowable Uses



## Emerging Lifestyles

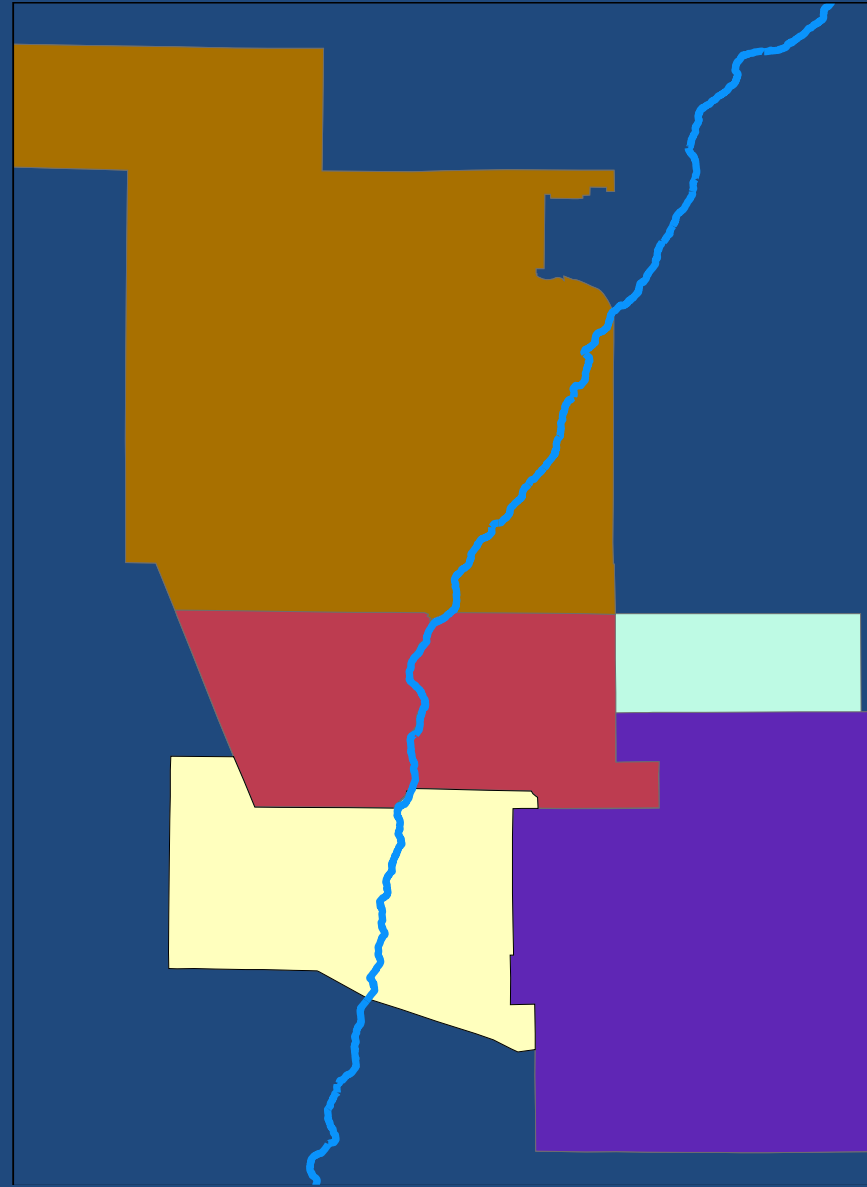


## Balancing Housing & Jobs

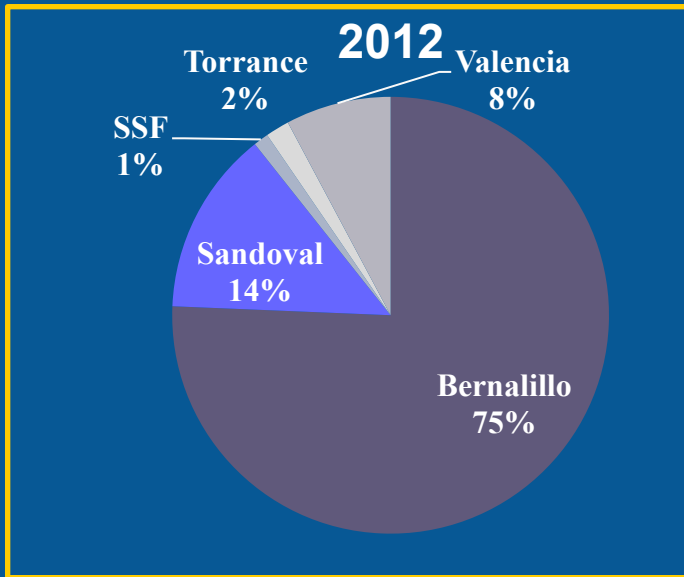


# Jobs to Housing Balance

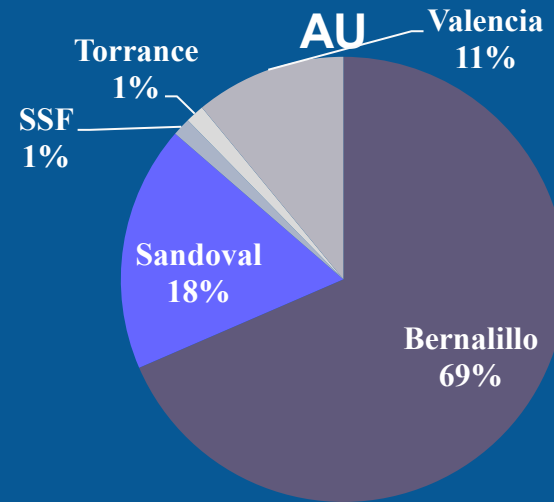
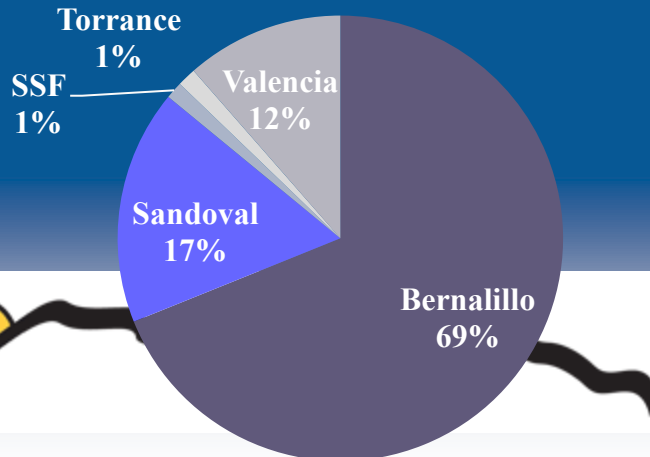
	West	East
<b>2012</b>	<b>0.56</b>	<b>1.34</b>
<b>Allowable Uses</b>	<b>0.52</b>	<b>1.41</b>
<b>Emerging Lifestyles</b>	<b>0.53</b>	<b>1.40</b>
<b>Jobs &amp; Housing</b>	<b>0.71</b>	<b>1.27</b>



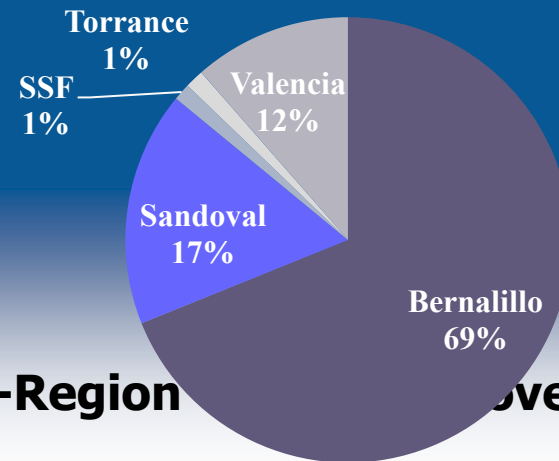
# Population Share by County



**EL**



**JH**

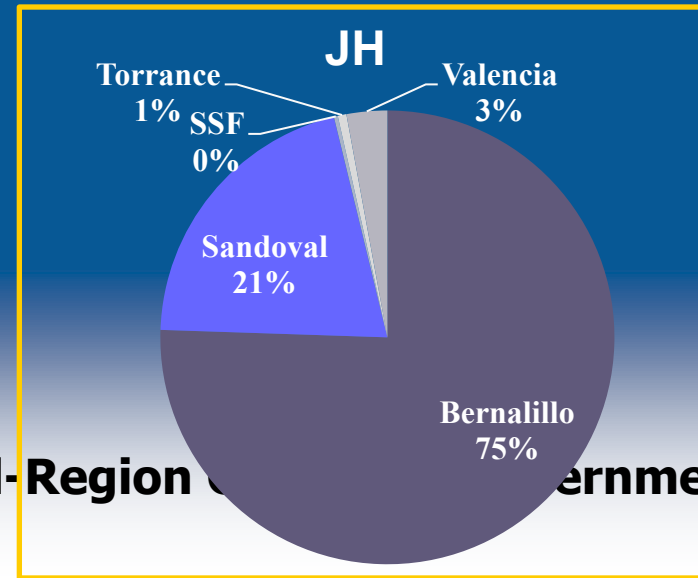
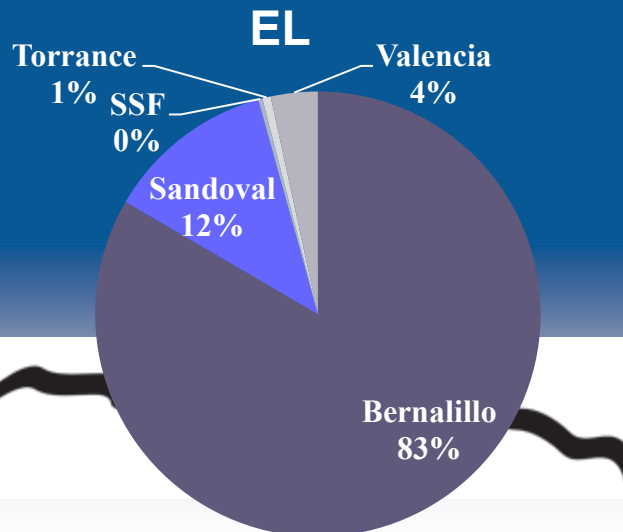
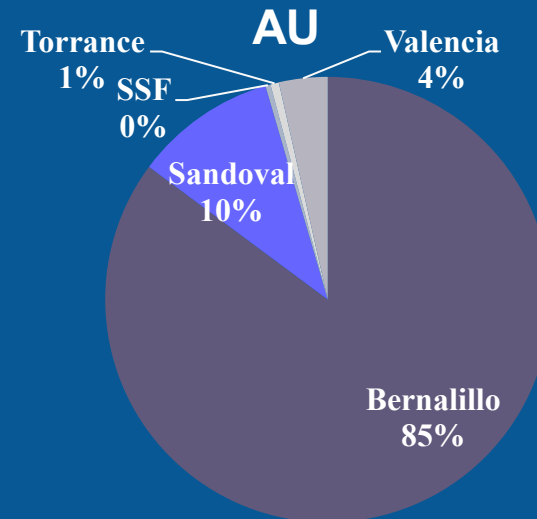
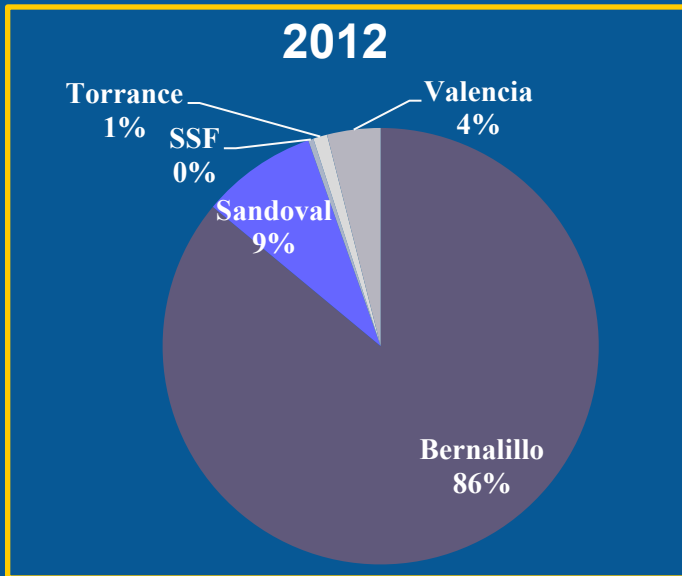


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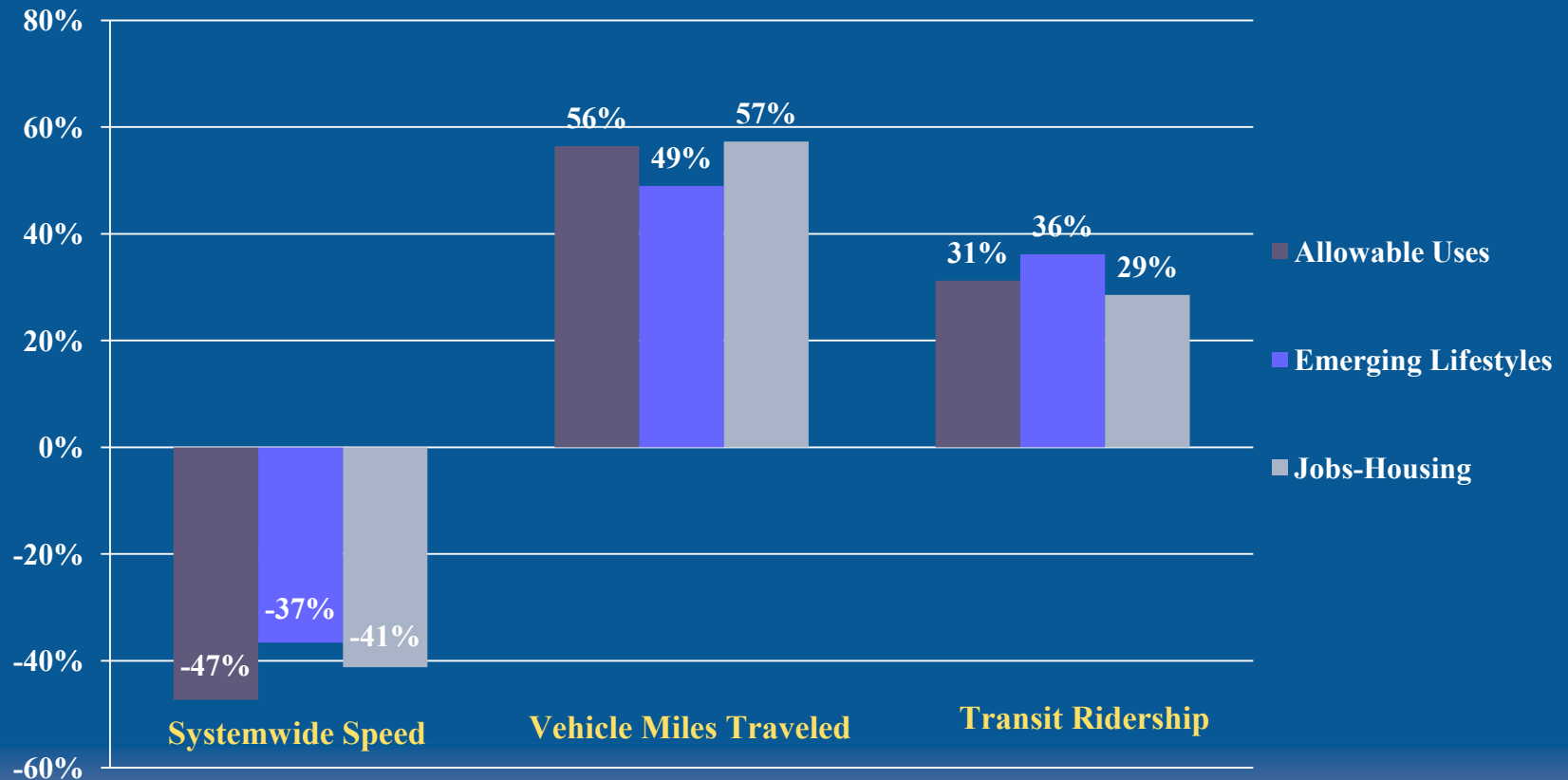


# Employment Share by County



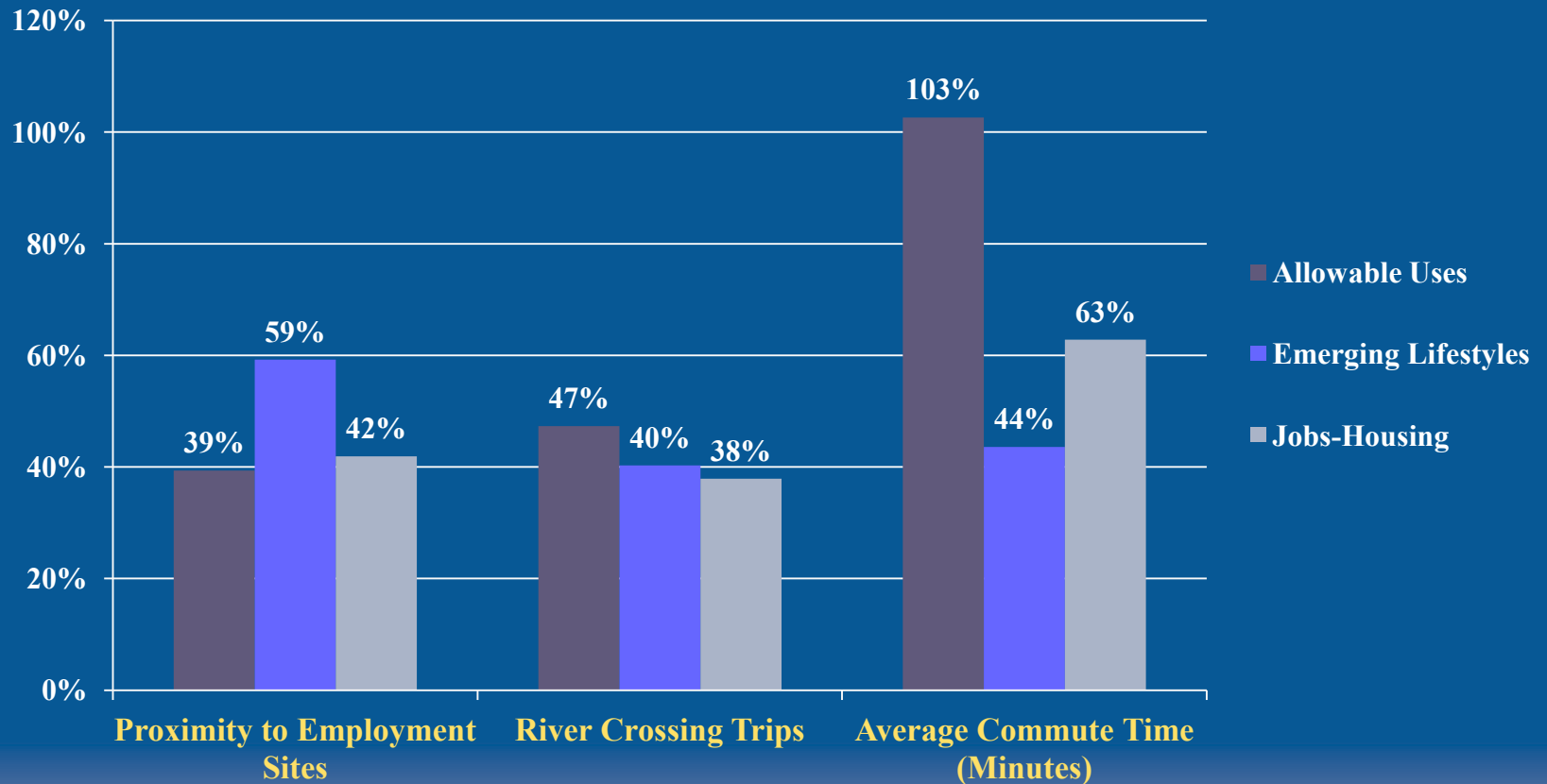
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# Roadway Performance



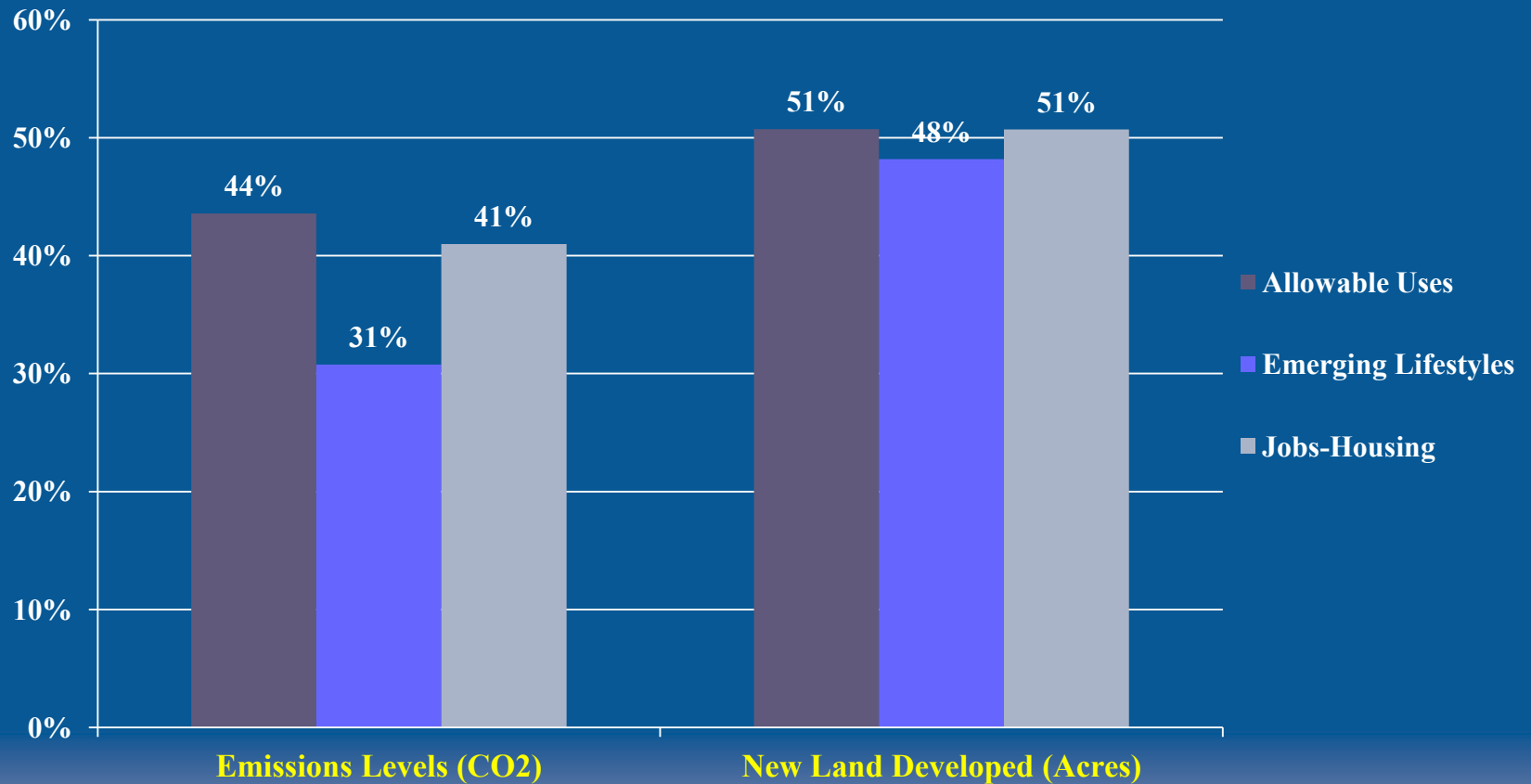
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# Commuting Measures



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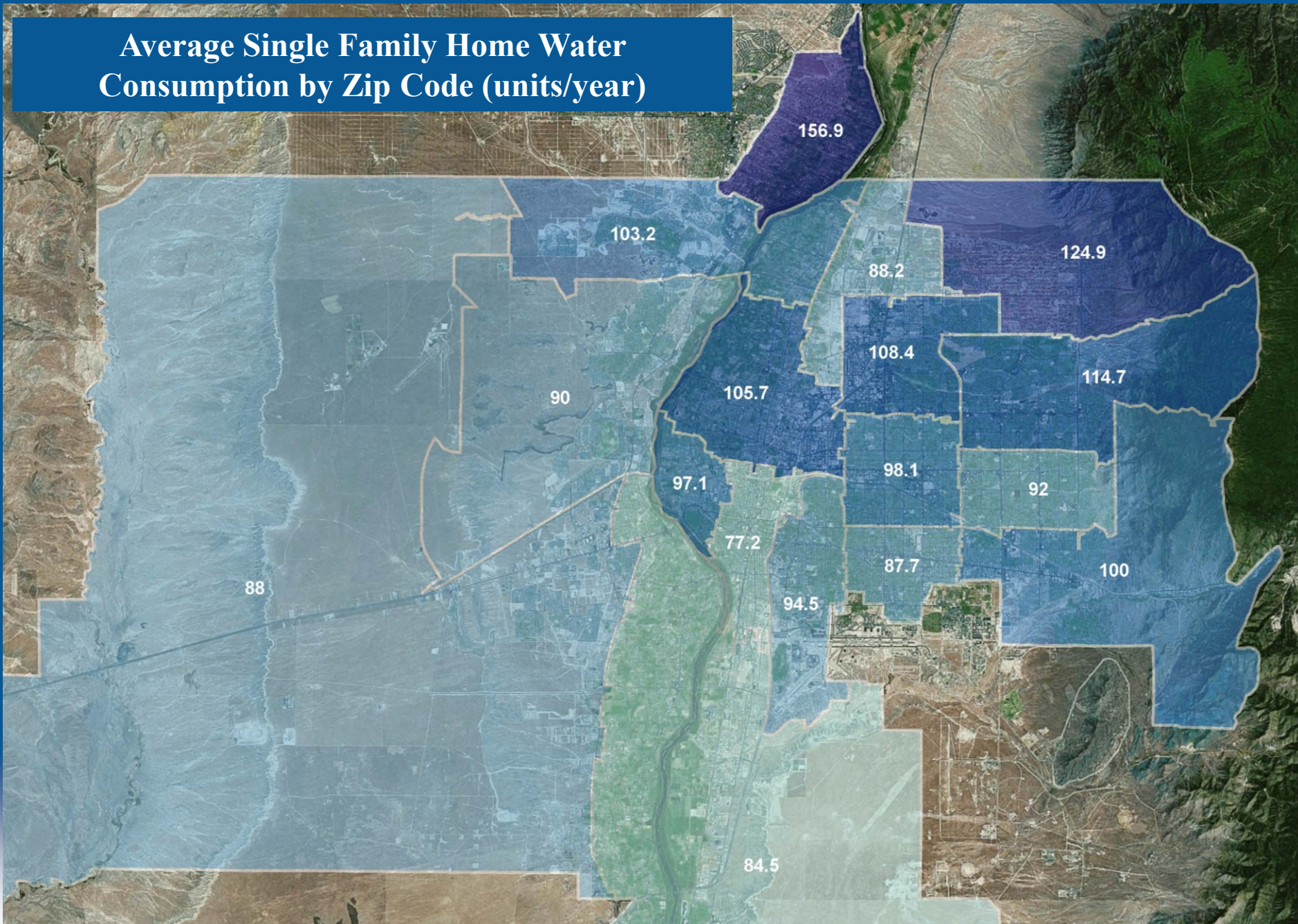
# Sustainability Measures



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# Average Single Family Home Water Consumption by Zip Code (units/year)



# Putting it All Together

- ◆ All scenarios show deteriorating travel conditions
- ◆ Zoning does have an impact on roadway performance; can test other strategies
- ◆ You can have fewer acres consumed by development and less congestion at the same time
- ◆ An increase in jobs west of the river appears to help alleviate the river crossing issue, but not commuting time
- ◆ Development patterns carry different benefits and costs to the region



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